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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kenneth Riordan

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06/14/2006

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EXAMINER

DUONG, OANH L

ART UNIT

PAPER NUMBER

2155

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,876

Applicant(s)

RIORDAN, KENNETH

Examiner

Oanh Duong

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-17 are presented for examination.

Claims 18-19 have been canceled.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/23/2006 has been entered.

Claim Objections

3. Claim 1 is objected to because of the following informalities:

Claim 1 recites the limitation "the downloading of common software content" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

In addition, it is not clear that the feature "a plurality of terminals" in line 7 is the same or different from the feature "a plurality of terminals" in line 4. If it is the same, "the plurality of terminals" or "said plurality of terminals" should be used. If it is different, one label cannot be used to imply to two different sets.

Appropriate correction is required.

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4. Applicant is advised that should claim 3 be found allowable, claim 4 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by **Tanaka et al.** (hereafter, Tanaka), U.S. Patent No. **6,671,509 B1**.

Regarding claim 9, **Tanaka** teaches a radio communication network software loading method (*i.e., transmitting/downloading software from base station to mobile communication unit(s) via a radio link, Fig. 1 col. 2 lines 22-39 and col. 12 lines 15-28*), comprising;

transmitting software content from a radio communication network to a plurality of terminals in the network by multiplexing the software content on a shared communication channel (broadcast channel) received by the plurality of terminals (*col. 3 lines 47-51, col. 4 lines 48-58, col. 8 lines 11-61, and col. 12 lines 14-28: Tanaka discloses software is transmitted from base station to mobile station(s) via radio link based on a time-division multiplex transmission scheme using a broadcast channel*); and

dynamically adjusting (dividing) the software content multiplexed on the shared communication channel (*col. 3 lines 47-51, col. 4 lines 48-58, col. 8 lines 11-61, and col. 12 lines 14-28, and col. 15 lines 58-67: Tanaka discloses software(s) is/are transmitted from base station to mobile station(s) via radio link based on a time-division multiplex transmission scheme using a broadcast channel the system, wherein software may be divided /adjusted if the software cannot fully accommodated in on extended information element, col. 15 lines 58-67*).

Regarding claim 10, **Tanaka** teaches dynamically adjusting the software content multiplexed on the shared communication channel from a radio device management

server (base station) in communication with the radio communication network (*i.e., the system software item may be divided /adjusted and then transmitted from base station to mobile station(s) via radio channels, col. 6 lines 5-10 and col. 15 lines 58-67*).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4, 6, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka et al.** (herein, Tanaka), U.S. Patent No. **6,671,509 B1**, in view of **Hamabe**, U.S. Pub. No. **2002/0115467 A1**.

Regarding claim 1, **Tanaka** teaches a network software downloading method (Fig. 3), comprising:

communicating terminal unique information for downloading of common software content from the network to a plurality of terminals in the network on corresponding dedicated communication channels for each terminal (*i.e., the user packet channels (i.e., traffic channels (TCH) are point-to-point bidirectional channels between base station and mobile station(s) and are mainly used to transfer user information, col. 6 lines 5-10, col. 8 lines 1-23 and col. 11 lines 51-55 and); and*

transmitting a large file such as common software content from the network to the plurality of terminal on the shared communication channel (col. 8 lines 20-22: Tanaka discloses base station transmits software to mobile station(s) through the broadcast channel).

Tanaka does not teach sending a message to a plurality of terminals on corresponding dedicated communication channels to receive the common software content on a shared channel; transmitting the common software content from the network to the plurality of terminal on the shared communication channel after sending the message.

Hamabe, in the same field of endeavor, teaches sending a message to a plurality of terminals on corresponding dedicated communication channels to receive a large file data on a shared channel (*i.e., Dedicated Physical Channel (DPCH) is used for sending control information from the base station to the mobile station by it downlink signal, page 1 paragraph [0005] and page 5 paragraphs [0045]-[0050]*); transmitting the data from the network to the plurality of terminal on the shared communication channel after sending the message (*page 7 paragraphs [0070]-[0077]: Hamabe discloses data is sent from base station to mobile station(s) via PDSCH/shared communication channel after identification code of base station is sent*).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to send a message to a plurality of terminals on corresponding dedicated communication channels to receive data on a shared channel, and to the data from the network to the plurality of terminals on the

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shared communication channel after sending the message as taught by **Hamabe**. One would be motivated to do so to enable relatively small amount of information to be transmitted via a dedicated channel, and a large file to be transmitted via a shared channel, thereby preventing an increase in interference wave power resulting from an increase in transmission power of the dedicated channel to increase line capacity while increasing reliability of control information for carrying out high speed data communication from base station to mobile station(s) (**Hamabe**, page 4 paragraph [0027]).

Regarding claim 2, **Tanaka** teaches the method of claim 1,

receiving a request for the common software content from a plurality of terminals on corresponding dedicated communication channels for each terminal (*col. 7 lines 31-32 and col. 8 line 16-18: traffic/dedicated channel is used to transfer user information such as information of request to download a file between base station and mobile station(s)*);

transmitting the common software content from the network to the plurality of terminals making the request on the shared communication channel after receiving the request (*i.e., in response to the request, software is transmitted through broadcast/shared channel to mobile station(s), col. 7 lines 44-50 and col. 8 lines 22-23*);

receiving confirmation from each of the plurality of terminals that received the software content on corresponding dedicated communication channels for each terminal after transmitting (*col. 7 lines 52-61: Tanaka discloses mobile station sends completion*

notice/confirmation to the base station after the software is received and stored in the memory).

Regarding claim 3, **Tanaka** teaches the method of claim 1, receiving confirmation from each of the plurality of terminals that received the software content for each terminal after transmitting (*col. 7 lines 52-61: Tanaka discloses mobile station sends completion notice/confirmation to the base station after the software is received and stored in the memory*).

Tanaka does not explicitly teach receiving confirmation on corresponding dedicated communication channels after transmitting

Hamabe teaches receiving confirmation on corresponding dedicated channel after transmitting (i.e., when sending of data is completed, the mobile station uses the DPCH/dedicated channel to notify base station of end of data reception, page 7 paragraph [0077]).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to transfer confirmation via dedicated channel from mobile station as taught by **Hamabe**. One would be motivated to do so to prevent an increase in interference wave power resulting from an increase in transmission power of the dedicated channel to increase line capacity while increasing reliability of control information for carrying out high speed data communication from base station to mobile station(s) (**Hamabe**, page 4 paragraph [0027]).

Regarding claim 4, **Tanaka** teaches the method of claim 1, receiving confirmation form each of the plurality of terminals that received the software content for each terminal after transmitting (*col. 7 lines 52-61: Tanaka discloses mobile station sends completion notice/confirmation to the base station after the software is received and stored in the memory*).

Tanaka does not explicitly teach receiving confirmation on corresponding dedicated communication channels after transmitting

Hamabe teaches receiving confirmation on corresponding dedicated channel after transmitting (i.e., when sending of data is completed, the mobile station uses the DPCH/dedicated channel to notify base station of end of data reception, page 7 paragraph [0077]).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to transfer confirmation via dedicated channel from mobile station as taught by **Hamabe**. One would be motivated to do so to prevent an increase in interference wave power resulting from an increase in transmission power of the dedicated channel to increase line capacity while increasing reliability of control information for carrying out high speed data communication from base station to mobile station(s) (**Hamabe**, page 4 paragraph [0027]).

Regarding claim 6, **Tanaka** teaches the method of claim 1, multiplexing a plurality of different common software content on the shared communication channel (*col. 3 lines 47-51, col. 4 lines 48-58, col. 8 lines 11-61, and col. 12 lines 14-28: Tanaka*

discloses a plurality of software items is transmitted from base station to mobile station(s) via radio link based on a time-division multiplex transmission scheme using a broadcast channel);

dynamically adjusting the plurality of software common software content multiplexed on the shared communication channel (i.e., the system software item may be divided /adjusted and then transmitted, col. 15 lines 58-67).

Regarding claim 16, **Tanaka** teaches the method of claim 9, receiving confirmation from each of the plurality of terminals that received the software content for each of terminal after transmitting (*i.e., the base station receives download completion notice from the mobile station(s), col. 6 lines 5-10 and col. 7 lines 46-61*).

Tanaka does not explicitly teach receiving confirmation on corresponding dedicated channel.

Hamabe teaches receiving confirmation on corresponding dedicated channel after transmitting (*i.e., when sending of data is completed, the mobile station uses the DPCH/dedicated channel to notify base station of end of data reception, page 7 paragraph [0077]*).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to transfer confirmation via dedicated channel from mobile station as taught by **Hamabe**. One would be motivated to do so to prevent an increase in interference wave power resulting from an increase in transmission power of the dedicated channel to increase line capacity while increasing

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reliability of control information for carrying out high speed data communication from base station to mobile station(s) (**Hamabe**, page 4 paragraph [0027]).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka** in view of **Hamabe**, in further in view of **Wiehler**, U.S. Patent No. **6,850,915 B1**.

Regarding claim 5, **Tanaka** teaches the method of claim 1, transmitting the common software content from the network to the plurality of terminals on the shared communication channel (i.e., software items are transmitted from the base station through the broadcast channel, col. 8 lines 42-43).

Tanaka does not explicitly teach transmitting a digital signature from the network to a plurality of terminals over corresponding dedicated communication channels for each terminal, and transmitting the common software content from the network to the plurality of terminals on the shared communication channel after transmitting the digital signature.

Hamabe teaches transmitting control information from the network to a plurality of terminals over corresponding dedicated communication channels for each terminal (page 1 paragraph [0005]: Hamabe discloses DPCH/dedicated channel is used to send control information from the base station to the mobile station(s)); and

transmitting the data from the network to the plurality of terminal on the shared communication channel after transmitting control data (*page 7 paragraphs [0070]-*

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[0077]: Hamabe discloses data is sent from base station to mobile station(s) via PDSCH/shared communication channel after identification code of base station is sent).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to send control information to a plurality of terminals on corresponding dedicated communication channels to receive data on a shared channel, and to transmit the data from the network to the plurality of terminals on the shared communication channel after sending the control information as taught by **Hamabe**. One would be motivated to do so to enable relatively small amount of information to be transmitted via a dedicated channel, and a large file to transmitted via a shared channel, thereby preventing an increase in interference wave power resulting from an increase in transmission power of the dedicated channel to increase line capacity while increasing reliability of control information for carrying out high speed data communication from base station to mobile station(s) (**Hamabe**, page 4 paragraph [0027]).

Wiehler teaches control information such as a digital signature is sent from the terminal before software is downloaded (col. 5 line 34-col. 61: Wiehler discloses terminal is provided with digital signature).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to provide digital signature to terminal as taught by **Wiehler** because it would enhance the security of the system (**Wiehler**, col. 6 lines 17-19).

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka** in view of **Hamabe**, and further in view of **Levitan**, U.S. Patent No. **6,965,913 B1**.

Regarding claim 7, **Tanaka** teaches the method of claim 6.

the combination of teachings of **Tanaka and Hamabe** does not teach dynamically adjust the plurality of different common software content in proportion to a changing number of the plurality of terminals receiving the plurality of different common software content.

Levitan teaches system wherein content delivery in broadcast radio is provided (see abstract). **Levitan** teaches a periodical transmission of each requested file is proportional to a number of clients requested the file (col. 7 lines 8-20).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of the combination of teachings of **Tanaka and Hamabe** to include a periodical transmission of each requested file is proportional to a number of clients requested the file as taught by **Levitan** because it would overcome both slow downloading and traffic jams (**Levitan**, col. 2 line 57-58).

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka** in view of **Hamabe**, and further in view of **Park et al.** (hereafter, **Park**), U.S. Patent No. **6,744,738 B1**.

Regarding claim 8, **Tanaka** teaches the method of claim 6.

the combination of teachings of **Tanaka and Hamabe** does not explicitly teach dynamically adjusting the plurality of different common content software content based on a priority factor.

Park teaches the wireless transmission system wherein a data transmission determiner for determining the transmission priority is provided (see abstract). **Park** teaches data is transmitted based on transmission priority (col. 3 lines 7-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the combination of the teachings of **Tanaka and Hamabe** to prioritize the transmission of more essential data over the transmission of less essential data as taught by **Park**. One would be motivated to do so to allow data to be transmitted faster than the conventionally technology when the bandwidth of the allowed channel is small and the amount of data to be transmitted per unit time is large (**Park**, col. 4 line 33-38).

12. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka** in view of **Levitan**, U.S. Patent No. **6,965,913** B1.

Regarding claim 11, **Tanaka** teaches the method of claim 9, the software content comprises a plurality of different software files (*i.e., a plurality of system software items, col. 3 lines 49-51*), adjusting the software content multiplexed on the shared communication channel (*col. 3 lines 47-51, col. 4 lines 48-58, col. 8 lines 11-61, and col. 12 lines 14-28, and col. 15 lines 58-67: Tanaka discloses software(s) is/are transmitted*

from base station to mobile station(s) via radio link based on a time-division multiplex transmission scheme using a broadcast channel the system, wherein software may be divided /adjusted if the software cannot fully accommodated in on extended information element, col. 15 lines 58-67).

Tanaka does not explicitly adjusting a transmission time of each of the plurality of software files.

Levitan teaches periodical transmission/transmission time is dynamically adjusted/proportional to a number of clients requested the file (col. 7 lines 8-20).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of the teachings of **Tanaka** to include a periodical transmission of each requested file is proportional to a number of clients requested the file as taught by **Levitan** because it would overcome both slow downloading and traffic jams (**Levitan**, col. 2 line 57-58).

Regarding claim 12, **Tanaka** teaches the method of claim 9, the software content comprises a plurality of different software files (*i.e., a plurality of system software items, col. 3 lines 49-51*), dynamically adjusting the software content multiplexed in the shared communication channel (*i.e., the system software item may be divided /adjusted and then transmitted, col. 15 lines 58-67*).

Tanaka does not explicitly teach adjusting the number of times each of the plurality of files is transmitted.

Levitan teaches system wherein content delivery in broadcast radio is provided (see abstract). **Levitan** teaches adjusting the number of times each of the plurality of files is transmitted (col. 7 lines 8-28).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to adjust the number of times each of the plurality of files is transmitted as taught by **Levitan**. One would be motivated to do to enable many user requesting for the same file to get it simultaneously from the same channel, thereby overcoming both slow downloading and traffic jams (**Levitan**, col. 2 lines 57-58).

13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka** in view of **Oz**, and further in view of **Jennings** et al. (hereafter, **Jennings**), U.S. Pub. No. 2002/0099842 A1.

Regarding claim 13, **Tanaka** teaches the method of claim, the software content comprises a plurality of software files (*i.e., a plurality of system software items, col. 3 lines 49-51*), dynamically adjusting the software content multiplexed on the shared communication channel (*i.e., the system software item may be divided /adjusted and then transmitted, col. 15 lines 58-67*).

Tanaka does not explicitly teach priory the transmission of software files that generates greater amounts of revenue relative to the transmission of software files that generate lesser amounts of revenue.

Oz teaches assigning different priority to different programs and performing based-multiplexing (col. 4 line 54-col. 5 line 2 and col. 6 lines 46-57). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of **Tanaka** to assign different priorities to different programs and performing priority-based multiplexing as taught by **Oz** because it would increase efficiency of the system, such as in Tanaka, in term of bandwidth constraint (**Oz**, col. 1 lines 12-13).

Jennings teaches content that generate more revenue receives priority during processing (page 24 paragraph [0300]). It would have been obvious to one of ordinary skill in the art at the time of the invention was made modify the teachings of **Tanaka** to designate the content/file that generate more revenue to receive priority during the processing as taught by **Jennings** because it would allow the system, such as in Tanaka, to provide a high quality service to the user who costs more.

14. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka** in view of **Park** et al. (hereafter, Park), U.S. Patent No. **6,744,738** B1.

Regarding claim 14, **Tanaka** teaches method of claim 9, the software content comprises a plurality of software files (*i.e., a plurality of system software items, col. 3 lines 49-51*), dynamically adjusting the software content multiplexed on the shared communication channel (*i.e., the system software item may be divided /adjusted and then transmitted, col. 15 lines 58-67*).

Tanaka does not explicitly teach prioritizing the transmission of more essential software files over the transmission of less essential software files.

Park teaches the wireless transmission system wherein a data transmission determiner for determining the transmission priority is provided (see abstract). **Park** teaches prioritizing the transmission of more essential data over the transmission of less essential data (col. 3 lines 7-42).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to prioritizing the transmission of more essential data over the transmission of less essential data as taught by **Park**. One would be motivated to do so to allow data to be transmitted faster than the conventionally technology when the bandwidth of the allowed channel is small and the amount of data to be transmitted per unit time is large (**Park**, col. 4 line 33-38).

15. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka** in view of **Mangin** et al. (herein, **Mangin**), U.S. Patent No. **5,982,778**.

Regarding claim 15, **Tanaka** teaches the method of claim 9, the software content comprises a plurality of software files (*i.e., a plurality of system software items, col. 3 lines 49-51*), dynamically adjusting the software content multiplexed in the shared communication channel (*i.e., the system software item may be divided /adjusted and then transmitted, col. 15 lines 58-67*).

Tanaka does not explicitly teach multiplexing software content on the shared communication channel based upon at least one of file size and a number of the plurality of terminals receiving the software files.

Mangin teaches dynamically adjust data transmissions on a shared medium based on a size of the transmitted data (col. 2 lines 37-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to dynamically adjust data transmissions on a shared medium based on a size of the transmitted data as taught by Mangin. One would be motivated to do so to minimize congestion throughout the network (**Mangin**, col. 2 lines 35-36).

16. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka** in view of **Antal** et al. (herein, Antal), U.S. Patent No. 2003/0110286 A1.

Regarding claim 17, **Tanaka** teaches the method of claim 9.

Tanaka does not explicitly teach fragmenting the software content multiplexed on the shared channel by packetizing the software content.

Antal teaches traffic is multiplexed along with data packet segment (page 2 paragraph [0013]).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teachings of **Tanaka** to multiplex traffic along with data packet segment as taught by **Antal**. One would be motivated to do so to enable

the efficiency of transmission to be improved by segmenting data in such a way that reduces transmission delay of the higher priority traffic (**Antal**, page 2 paragraph [0012] lines 1-4).

Response to Arguments

17. Applicant's arguments with respect to claims 1-8, 11, 15-17 have been considered but are moot in view of the new ground(s) of rejection.

18. Applicant's arguments filed 02/17/2006 with respecting to claims 9, 10 have been fully considered but they are not persuasive.

In the remarks, applicant argued in substances that

(a) Prior art does not teach dynamically adjusting the (different) content on the shared communication channel.

As to point (a), Tanaka does teach dynamically adjusting the (different) content on the shared communication channel (for example, *col. 3 lines 47-51, col. 4 lines 48-58, col. 8 lines 11-61, and col. 12 lines 14-28, and col. 15 lines 58-67: Tanaka discloses software(s) is/are transmitted from base station to mobile station(s) via radio link based on a time-division multiplex transmission scheme using a broadcast channel the system, wherein software may be divided /adjusted if the software cannot fully accommodated in on extended information element, col. 15 lines 58-67*).

(b) Prior art fail to disclose or suggest dynamically adjust the software content multiplexed on the shared communication channel from a radio device management server in communication with the radio communication network.

As to point (b), Tanaka does teach dynamically adjust the software content multiplexed on the shared communication channel from a radio device management server in communication with the radio communication network (for example, (for example, *col. 3 lines 47-51, col. 4 lines 48-58, col. 8 lines 11-61, and col. 12 lines 14-28, and col. 15 lines 58-67: Tanaka discloses software(s) is/are transmitted from base station/a radio device management server to mobile station(s) via radio link based on a time-division multiplex transmission scheme using a broadcast channel the system, wherein software may be divided /adjusted if the software cannot fully accommodated in on extended information element, col. 15 lines 58-67).*

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Hall et al., WO 00/74412 A1, disclose method and apparatus of downloading into a radio terminal.

b) Jamal et al., U.S. Pat. No. 5,956,368 discloses downlink channel handling within a spread spectrum communications.

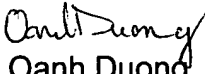
c) Toda, U.S. Pub. No. 2002/0032756 A1 discloses download system for downloading software or data to terminal.

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20 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh Duong whose telephone number is (571) 272-3983. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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